REMARKS

Claims 1-8 are pending.

Claim 1, 3 and 4 are amended.

Claim 2 is cancelled.

Claims 7 and 8 are new.

I. Amendment to the Claims

Claim 1 is amended to incorporate all of the elements of dependent Claim 2, that is now cancelled. No new matter was added to the Claim 1.

Claims 3 and 4 are amended to depend on amended Claim 1.

New Claim 7 is added to claim a method for representing regions of homogeneous color in a digital picture. Specifically, a digital picture is divided into discrete blocks (specification, page 3, lines 5-9). Next, a scalar gradient value for each block is estimated, (specification, page 4, lines 9-22). Then the blocks that are homogenous in color and are spatially connected are presented as data defining a probability distribution, (specification, page 7, lines 15 to page 8, lines 5). The benefits of using such information in a search/database are also explained in this section.

New Claim 8 is added to claim a method for representing regions of homogeneous color in a digital picture. Specifically, the picture is first divided into discrete blocks (specification, page 3, lines 5-9). Next, a scalar gradient value for each block is estimated, (specification, page 4, lines 9-22). Then the blocks that are homogenous in color and the distances between such blocks are used to calculate a probability mass function, (specification, page 8, lines 13-22). No new matter was added to the specification in view of the new Claims.

II. 35 U.S.C. 102(a) Rejection of Claim 1

The Examiner rejected Claim 1 as being unpatentable by the reference entitled "Automatic Watershed Segmentation of Randomly Textured Images" by Shafarenko et al. (hereafter as being unpatentable by the reference entitled

"Automatic Watershed Segmentation of Randomly Textured Images" by Shafarenko et al. (hereafter 'Shafarenko').

This issue is now moot as the Applicants have incorporated Claim 2 into amended Claim 1. Applicants request that the remove this ground of rejection.

III. 35 U.S.C. 103(a) Rejection of Claims 2-5

The Examiner rejected Claims 2-5 under 35 U.S.C. 103(a) as being unpatentable by the reference entitled "Automatic Watershed Segmentation of Randomly Textured Images" by Shafarenko et al. (hereafter 'Shafarenko') in view of the reference entitled "Unsupervised Video Segmentation Based on Watersheds and Temporal Tracking) by Wang (hereafter 'Wang'). The Applicants disagree with this ground of rejection, as neither Shafarenko nor Wang, alone or in combination, disclose or suggest the features of Claim 1.

Please note that the Applicants have incorporated Claim 2 into amended Claim 1, where the previous rejection to Claim 2 now also applies to amended Claim 1.

Amended Claim 1 claims a step of "digitizing the color gradient field". The Examiner in the Office Action states that this step is anticipated as, "Shafarenko's method is implemented on a computer, so any computed values are digital," (Office Action, page 4, lines 4-5). Applicants disagree with the Examiner's interpretation of the "digitizing the color gradient field" step. Specifically, because the gradient field values generated during the estimation step represent any value from zero to infinity, the digitizing step divides the ranges of values into a finite range (see specification page 8, lines 11-15). The digitization step of Claim 1 is not same as specified by the Examiner.

Amended Claim 1 also claims a step of "segmenting the smoothed color gradient field with a watershed algorithm that divides the smoothed color gradient field into a set of spatially connected regions of homogenous color," (emphasis added). The Examiner states in the Office Action that such an element is anticipated in Shafarenko because the "watershed algorithm uses LUV gradient to segment image by color," (Office Action, page 4, lines 2-3).

Applicants note the section referred to by the Examiner states, "adapting the watershed transform to the LUV gradient of images with small color saliency as well

as developing appropriate techniques for the perceptually acceptable segmentation of several color images," (Shafarenko, page 1531, paragraph 3). This section does not suggest or refer to the use of a watershed algorithm segmenting a smoothed color gradient field into a "set of spatially connection regions of homogenous color," as claimed in Amended Claim 1.

For the reasons cited above, amended Claim 1 is patentable. Applicants request that the Examiner remove the rejection to Claim 1. Claims 3 to 5 are also patentable for the reasons cited in connection with Claim 1. Applicants request that the Examiner remove the rejection to these claims, as well.

Applicants will submit formal drawings when the issues of patentability are resolved.

Respectfully submitted,

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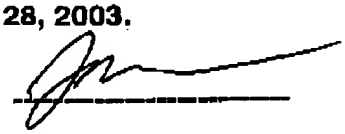

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